

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
3 February 2005 (03.02.2005)

PCT

(10) International Publication Number
WO 2005/009227 A1

(51) International Patent Classification⁷: **A61B 1/00**

(21) International Application Number:
PCT/JP2004/010539

(22) International Filing Date: 16 July 2004 (16.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-281850 29 July 2003 (29.07.2003) JP
2004-011954 20 January 2004 (20.01.2004) JP

(71) Applicants (*for all designated States except US*):
PENTAX CORPORATION [JP/JP]; 36-9, Maenocho 2-chome, Itabashi-ku, Tokyo, 1748639 (JP). **NATIONAL CANCER CENTER** [JP/JP]; 5-1-1, Tsukiji, Chuo-ku, Tokyo, 1040045 (JP).

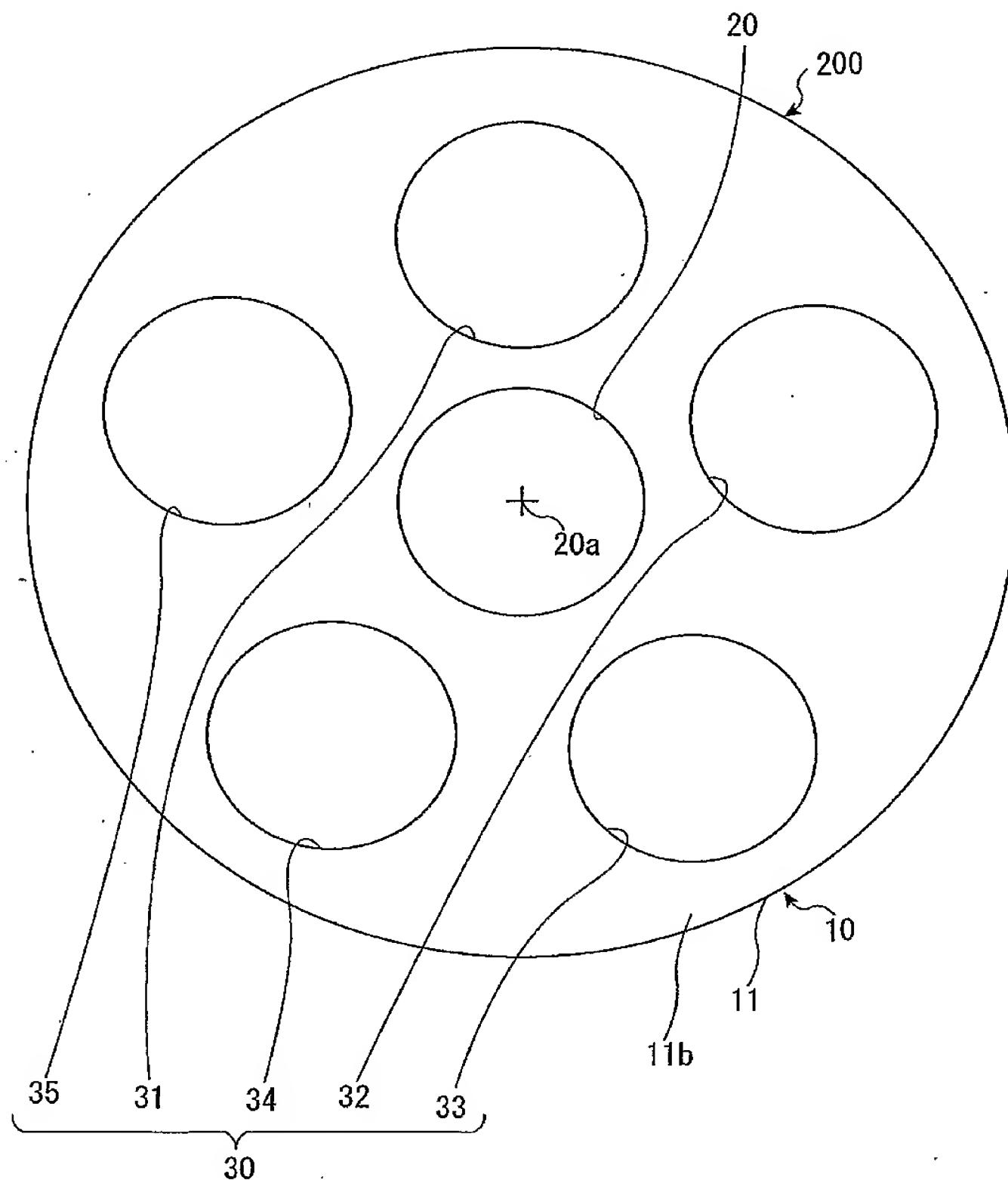
(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **SUGIYAMA, Akira** [JP/JP]; c/o PENTAX Corporation, 36-9, Maenocho 2-chome, Itabashi-ku, Tokyo, 1748639 (JP). **OHARA, Kenichi** [JP/JP]; c/o PENTAX Corporation, 36-9, Maenocho 2-chome, Itabashi-ku, Tokyo, 1748639 (JP). **SANO, Hiroshi** [JP/JP]; c/o PENTAX Corporation, 36-9, Maenocho 2-chome, Itabashi-ku, Tokyo, 1748639 (JP). **IKEDA, Kunitoshi** [JP/JP]; c/o PENTAX Corporation, 36-9, Maenocho 2-chome, Itabashi-ku, Tokyo, 1748639 (JP). **KAKIZOE, Tadao** [JP/JP]; c/o NATIONAL CANCER CENTER, 5-1-1, Tsukiji, Chuo-ku, Tokyo, 1040045 (JP). **KOBAYASHI, Toshiaki** [JP/JP]; c/o NATIONAL CANCER CENTER, 5-1-1, Tsukiji, Chuo-ku, Tokyo, 1040045 (JP).

(74) Agents: **MIURA, Kunio** et al.; Nishiwaki Building 4F, 1-4, Kojimachi 4-chome, Chiyoda-ku, Tokyo, 1020083 (JP).

[Continued on next page]

(54) Title: INTERNAL TREATMENT APPARATUS FOR A PATIENT AND AN INTERNAL TREATMENT SYSTEM FOR A PATIENT



(57) Abstract: An internal treatment apparatus for a patient having a flexible tubular body to be introduced into a patient includes a center opening for inserting therethrough an endoscope for observing a target site, the center opening being circular in cross section and disposed at a center of an end face of the flexible tubular body; and a plurality of circumferential apertures through which surgical instruments are inserted for performing a surgical procedure on the target site, the plurality of circumferential apertures being provided in the flexible tubular body at equi-angular intervals around the center opening.

WO 2005/009227 A1



(81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- *with international search report*
- *with amended claims*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.